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States Would Have Equal Part in Airport Program

To a recent Mid-west gathering of aviation experts CAA Administrator Charles I. Stanton suggested that the people of the United States get behind an airport construction program which, by apportioning responsibility between the state and federal governments, will give the nation an airport system matching the efficiency of our highway system.

Admitting that a major question of policy is involved, Stanton made some statements which he believes can be used as a basis for future discussions.

Formula Needed

According to Stanton, there is no simple automatic solution to the problem, but "If the President and Congress authorize a federal airport program, the funds appropriated would be apportioned to the states by the CAA upon the basis of some accepted formula. Such a formula should take into account four factors—the area of the state, its population, the number of registered aircraft in the state and the existing number of accredited airports. Under this plan, as in the federal highway system, each state would have to match a specified percentage of its proportion of the federal funds.

"Decentralization of federal operations and delegation of more responsibility to state aviation agencies would be one result. Projects within each state would be selected and carried out by the state's aviation agency. Only sites included within the CAA national airport plan would be eligible for federal aid, and CAA standards of location, layout and construction would have to be met for the class of airport proposed."

Stanton pointed to the fears of airmen that state regulations would prevent aerial progress, and to the fears of state officials that their local needs would be inadequately considered by federal officials. Under his plan, he pointed out, these fears will be allayed because federal airport authorities would retain control of national planning and of minimum standards, while local problems would be decided at the state level, "where such decisions should be made."

Every airport is potentially a base for inter-state business, he said, thus qualifying the federal government to participate in its planning and construction. His plan, he stated, is not in final form, but is based upon CAA's airport-building experience.

1942 a Banner Year For U. S. Carriers

A statistical review of the 1942 operations of each domestic air carrier, featuring a month-by-month comparison and a comparison of 1942 with 1941, appears in this issue of the Journal. Reports on the number of revenue passengers carried by routes, revenue miles flown per route, passenger load factors, and on pounds of express carried per route are presented in tables appearing on pages 118 and 119.

The statistical picture of air carrier operations reflects the effect of government requisitioning of nearly half the airlines' planes in May 1942. It also shows the herculean war job performed in the face of such a loss of equipment. The amount of express carried in 1942 more than doubled that of 1941.

"Teletype Editor" New Short-cut In ATC Work

An automatic message editor which "reads" all flight plan messages coming into an airway communications station over a teletype circuit, records only those addressed to the traffic control center in which it is used and discards the rest, is being developed at the CAA air traffic control center in Washington.

The "editor" under experiment consists of a group of relays which are inserted in the line connecting the "receiving only" printer in the control center with the main line in the communications station. By reading the addresses of incoming messages and connecting the teletype printer only when the message received is addressed to the Washington center, the mechanism saves one man a lot of work, saves an estimated paper cost of about $210 a year, and cuts down on the noise element.

There are, for instance, two teletype circuits in the Washington center. Each circuit carries a certain number of messages which the center uses in air traffic control. However, 84 percent of the messages passing over these circuits have nothing to do with flights in or out of Washington.

CAA Man's Idea

Ordinarily the "editing" of these messages requires that one person watch the teletype machine continuously, tear off each message as it comes up, throw away those not addressed to the center and shoot the other 16 percent through a connecting pneumatic tube to the ATC center.

The automatic message editor, an improvement suggested to CAA by George

(See Teletype Editor page 122)

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15,000 Miles of Air Routes Charted in Amazon Jungles

"A country with telephone poles made of solid mahogany, rich in rubber, tin and silver and other resources—and with unlimited possibilities for aviation development," was Aviator Jack Knight's description of South America upon his return recently from six months of charting 15,000 miles of air routes in his search for rubber sources for the United States Government.

He expressed the conviction in a press interview that with the development of better air equipment, the building of railroads, and the full use of the waterways, all the rubber needed by the United States could be brought out of South America.

Knight, pioneer aviator who got the U. S. mail through back in 1921 over a route lighted by bonfires, found his latest pioneering expedition considerably more dangerous and primitive.

Hard Going

Calling South America, where he added around 1,600 flying hours to his record, the "roughest terrain" in his 27 years of flying experience, Knight told a story of charting courses over thousands of miles of Amazon jungles where the only possible landing places were the rivers with high mud banks and the lakes. The jungle natives, far from being friendly bonfire lighters, were headhunters who came uncomfortably close to wearing Knight's own head in shrunken miniature. In a grounded plane one night with eight aboard, he woke up to see two of them peering at him through the hatch. Unarmed except for a flashlight and knowing that their poison arrows could kill him in 30 seconds, he flashed his light into their faces. Panicked, they dived over the side of the plane and made their getaway.

Using eight Catalina flying boats, each with a crew of five, exploration parties of 16 or 18 were landed on rivers and lakes to hunt for rubber by boat. Camps were established at rubber sources, with Spanish or Portuguese workers and all their supplies being flown in, and rubber they gathered flown out again to river bases like Manaos in the interior of Brazil. Here it was received in warehouses and reshipped by plane to the coastal cities of Belem, Paramaribo and Georgetown. From the coastal cities the rubber was flown to Miami.

By Air or Water

"At the edge of Manaos, a city of 90,000, the jungle begins," Knight said in describing the transportation obstacles. "The streets come to a dead end. There are no railroads nor highways leading out."

While air transportation is possible, he said that there were few air facilities. The new airport being built at Manaos has a runway of only 4,000 feet. And three radio range stations, one located at Iquitos, Peru, a navigable port far up the Amazon, were the only airway aids available to the pilots on the mission.

Knight, in charge of all flight personnel for the mission, went to South America the first of January and was stationed in Lima, Peru, where he spent the first three months organizing routes. Flights were made into the Amazon basin through the pass at Chiclayo, the only possible route in that section through Andes, which Knight described as being "real" mountains of over 20,000 feet in height. "It is impossible," he said, "to get across the Andes after 12 o'clock noon. The moisture rising from the Amazon jungles steams up the passes."

Recently appointed CAA senior air carrier inspector, Knight, who has been flying since 1916, has over 19,000 flying hours to his credit. One of the first airmail pilots, he flew the Omaha-Chicago route, and for the past 15 years has flown over every route in the United States.

Obstruction Marking Subject of Manual

A revised edition of the "Obstruction Marking Manual", which outlines the requirements for "airmarking" obstructions located along the civil airways or near landing fields has just been issued by the CAA.

As a protection to low-flying planes, wherever the airways stretch or landing fields are located the law limits the height of man-made structures and requires that they as well as natural high points be plainly marked. The new edition contains the regulations and standards which govern such protection of air navigation. Copies of the manual can be obtained by writing to the Publications and Statistics Division, CAA, Washington.

Icy Runway Causes DC3 Accident

A slippery runway caused the non-injury but major damage accident to a United Airlines DC3A December 20, 1943 at Moline, Ill., according to an accident investigation report recently issued by the Civil Aeronautics Board. Sheet ice and three inches of dry snow covered the runway to which the flight had been cleared and the plane ran off the airport and into a highway embankment. Three passengers, the crew and a company employe were uninjured.

Named as a contributing factor in the accident report was lack of vigilance by the United station manager for not keeping himself currently informed on the condition of the runway.

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American Asks Route to London

Of the 18 domestic air carriers signing an international air policy agreement in May, American Airlines is the first to file an application with the CAB for a foreign route.

American, the largest domestic air carrier, has applied for a route from the terminal points of Chicago or New York to the terminal point of London, with Paris named as an alternate city. Detroit and Boston were named as intermediate stops, the first for service out of Chicago and the latter for service out of New York.

With the exception of Northwest's amended application on its "over the top" route to India, none of the remaining 16 air carriers expressing intentions of applying for foreign routes, has thus far filed with the Board.

Northwest has requested CAB's authorization to fly from Seattle, Washington, to Nome, Alaska, then out along the Alaskan Aleutians to the great Japanese Naval Base of Paramushiro in the Kurile Islands, and on into Tokyo.

CAA Sponsors Study Aids For Preflight

Preflight high school students who changed character at CAA summer conferences by asking for more work and more equipment to work with in their aeronautics courses will find a number of aids available during their second preflight school year.

Homemade Equipment

A manual, showing teachers how to make laboratory equipment out of material they have at hand, is being prepared. This CAA-sponsored manual of instructions on how to make and use laboratory apparatus is being developed at Wayne University, Detroit, Mich., and Miami University, Oxford, Ohio. Homemade types of the apparatus described are being constructed to prove their practicability and will be exhibited in a model laboratory in Washington. The manual, for example, will show the best types of home-built wind tunnels—necessary equipment for demonstrating the principles of lift and drag on plane wings. Some schools have already built tunnels, using gasoline drums and electric fans.

Films and Charts

Visual aids, like films, charts and weather maps are also being developed. With weather maps to study classes will be able to get experience in amateur forecasting by keeping a record of the weather throughout the year and making observations.

As a yardstick by which the student can measure his progress and also as an aid to teachers, a series of 10-minute achievement tests is being developed by CAA in cooperation with the American Council of Education and will be available to schools with preflight aeronautics courses.

34 New Applications Added to Board List

Doing another month's rush business in August, the CAB received 34 new route applications, 20 of them from new companies.

Among them were seven applicants asking for authorization to carry freight: Frisco Transportation Co., St. Louis Mo.; All States Freight, Inc., Akron, Ohio; Schreiber Trucking Co., Pittsburgh, Pa.; Midwest Hauler, Inc. and Mutual Trucking Co., both of Toledo, Ohio; Ringsby Truck Lines, Inc., Denver, Colo.; and North South Air Lines, Inc., Memphis, Tenn.

One of the applicants, Nu-Planes Flyaway Service, Inc., Washington, D. C., asked for authority to operate a flyaway service with respect to new or reconditioned airplanes from all points in the United States where they are produced to all destinations in the United States, Canada, or Mexico.

Traffic Control School Operates Miniature Airport

For simulated on-the-job training the staff of a CAA traffic control school has created a working model airport, complete even to the details of a miniature transport plane which makes an instrument approach and let-down into the airport, rotating beacons, a range station and boundary lights.

The unique application of the visual-aid approach to the teaching of traffic control has been made at the Atlanta regional office of the CAA and the model airport is a replica even to contour lines of the Atlanta Airport and its surrounding area.

Made of Odds, Ends

Typical of the CAA's part in the war effort, the effective teaching device has been built by initiative and ingenuity at a minimum cost to the government. The staff of the training center constructed the device in its spare time and at its own expense and appropriated such equipment as wire clothes hangers and toy construction sets.

The model is built on a specially constructed table 7 by 12 feet and 30 inches high. Hills, drainage lines and roads are modeled from an asbestos cement mixture. The airport proper is made from a sheet of wall board. Six students, seated around the table, can take part at one time, simulating different aircraft being guided in by the control tower. The "tower" consists of a stand, erected beside the table, containing all the installations of an actual tower. This stand is connected by telephone to the student positions and has a master control of the model plane and airport.

Aid to Military

To illustrate instrument approach and orientation problems a small car, mounted on tracks suspended from the ceiling (the track made from clothes hangers and toy "girders"), hauls the model plane about. The track is laid out in the pattern of both an orientation problem and a standard instrument approach. Climb and descent and forward motion are controlled by a telescopic rod and two toy electric motors.

Model planes are manually operated about the airport to teach the student to handle local problems, such as taxiing and parking. The more complicated problems arising from flagged-off areas, rough areas, and maintenance crews and equipment are also studied.

The Atlanta school is one of seven which the CAA is operating in its geographical subdivisions, or "regions". The school program was started shortly after the United States entered the war to solve problems arising from increased traffic and a loss of trained personnel to the armed forces. Originated as a CAA recruitment-training plan the program has become a helping hand to the military services, turning out controllers for both army and navy.

The above picture shows the miniature airport with model plane, upper right, in the approach position. Range towers can be seen in the background and beside the table is the control stand.

Acrobatic Show Ends In Plane Smash-up

James George Brown received minor injuries and his passenger, Wilburn Lee Lawrence, was seriously injured in an accident which occurred 7 miles northwest of the Tifton, Ga., airport on December 23, 1942. Brown held a private pilot certificate with a single-engine 0–80 h. p. land rating. He had logged approximately 275 hours of flying time. Lawrence was not certificated as an airman. The aircraft, a Piper J3F–65, was demolished.

Brown, accompanied by Lawrence, took off from the Tifton Airport without clearance. He climbed to approximately 3,000 feet in the vicinity of the airport and executed two loops. After circling the town, he headed northwest and executed a third loop directly over a farm house. Following this loop, an intentional spin was begun at an altitude the pilot estimated to have been about 2,800 feet but admitted that it might have been considerably lower. Rotation was checked at a very low altitude and only partial recovery had been accomplished when the aircraft struck the ground with the nose down at an angle of approximately 15°. It somersaulted forward and came to rest in an upright position.

Examination of the wreckage revealed no evidence of failure of any part of the aircraft prior to impact. Dual controls were connected. The throttle control was in the closed position and the ignition switch was off. Neither the pilot nor his passenger wore a parachute. The pilot stated that the farm house over which he was performing acrobatics was the home of his girl friend, and that he had looped and spun over her home on several previous occasions; that he was familiar with the spin characteristics of the subject aircraft with two occupants aboard, having executed spins many times, with the aircraft so loaded; and that after he had made two turns in the subject spin he attempted to stop rotation but the spin continued for 4 or 5 additional turns.

Statements made by the pilot as to the measures taken to recover from the spin indicated that he was deficient in knowledge of most effective spin recovery.

Probable cause.—Recklessness of the pilot and poor technique in effecting recovery from a spin.

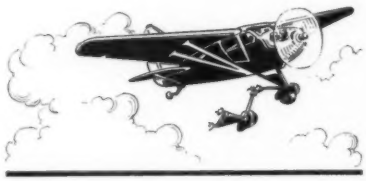
Faulty Plane Repair Causes Student Death

An accident which occurred near Broken Arrow, Okla., on January 24, 1943, resulted in fatal injuries to Student Pilot Jack Sutherland and minor injuries to his instructor, Ralph E. Miller. Miller held a commercial pilot certificate with single-engine 85-265 h. p. land and flight instructor ratings. He had accumulated approximately 659 hours of solo flying time, about 500 of which were in the type of aircraft involved. Sutherland held a student pilot certificate and was a CAA war service trainee at the Spartan School of Aeronautics. The aircraft, a Fairchild M-62A, was demolished.

Instructor Miller and Student Sutherland took off from Municipal Airport, Tulsa, Okla., and proceeded to an area about 4 miles north of Broken Arrow to practice chandelles and lazy eights. After the student had completed two chandelles, the instructor took over the controls and instructed Sutherland to follow through while he executed the maneuver. The plane was nosed downward about 15 or 20 degrees and after an indicated airspeed of approximately 115 m. p. h. had been reached, the instructor felt there was something wrong with the plane and observed the right wing separating from it. He stated that he next saw the student, who was in the front seat, getting out of the aircraft but did not recall what happened thereafter until he felt the shock of the harness when his parachute opened about 500 feet above the ground. The ripcord of Student Sutherland's parachute had not been pulled and evidence indicated that he was probably struck and rendered unconscious by a part of the right wing flap which folded over the top of the cockpit. When examined after the accident, Sutherland's parachute opened normally.

Examination of the wreckage revealed that during flight the complete right wing, with the exception of the flap, had separated from the rest of the airplane at its connection with the fuselage. The wing parts were located approximately one mile from the main portion of the wreckage. It was established that the initial failure occurred in the front spar of the center section at a point where the lower spar flange had been repaired by means of a scarf splice.

The subject aircraft had been involved in an accident November 7, 1941, in which the center section was damaged beyond repair. The plane was recertificated June 2, 1942, after it had been completely rebuilt. The newly-installed center section had formerly been a part of another plane of a similar make and model. This latter aircraft also had been involved in an accident, following which the center section was salvaged and repaired by the insertion of a splice in the lower flange of the front spar. This center section was subsequently sold to the Spartan Aircraft Co. The



front spar splice is the one which failed during flight on January 24. A detailed examination of the splice revealed that poor gluing, probably aggravated by the severe slope of the scarf joint and by moisture entering between the plywood web and the lower flange during service, rendered the scarf splice appreciably understrength.

Probable cause.—Failure of wing during acrobatic maneuvers.

Contributing factor.—Faulty repair of spar flange.

Belt Hooked on Stick Causes Training Crash

Carl David Williams was seriously injured in an accident which occurred at the Municipal Airport, Blackwell, Okla., December 22, 1942. Williams held a student pilot certificate and had accumulated approximately 30 hours of flying time, 12 of which were solo. He was enrolled in the War Training Service elementary course at the Northern Oklahoma Flying Service. The aircraft, a Piper J5A, was demolished.

Williams, occupying the front seat, took off from the Municipal Airport. Witnesses stated that the plane gradually increased its angle of climb until it stalled at an altitude of about 30 feet. It fell off to the left, and struck the ground at an angle of approximately 45°, with the engine developing full power.

Investigation revealed no failure of any part of the aircraft prior to impact. Dual controls were installed. However, examination of the wreckage disclosed that the safety belt was fastened around the rear control stick which restricted the use of the elevator. It was a practice of the Northern Oklahoma Flying Service, when leaving tandem type aircraft parked on the line, to wrap the rear safety belt around the control stick to protect the controls. On November 5, 1942, another student at this school took off with the rear stick fastened in a similar manner. He managed to get back to the field and land without damaging the aircraft. As a result of this incident the operator held an instructors' meeting to insure the cautioning of students to check the controls before flight.

Probable cause.—Take-off with safety belt fastened to dual control stick, restricting use of the elevator.

Contributing factor.—1. Failure of the student to check the controls prior to take-off. 2. Poor system of locking movable surfaces against wind damage which invites just such an accident.

Air Cargo, Plane Surplus Discussed by Welch Pogue

Cargo, small-city service, and the problems of handling surplus wartime aircraft are subjects discussed by L. Welch Pogue, Chairman of the Civil Aeronautics Board, in recent speeches.

Merchandising by Air

In his "cargo by air" speech at Oklahoma City, Pogue discussed the advantages of shipping by air and comparative costs.

Declaring the 80 cents a ton mile charged in the past much too high for general shipping, he pointed out that cargo-conscious air carriers have recently reduced rates by about 10 or 11 percent and predicted that future rates will stair-step down.

Chairman Pogue enumerated the other factors, besides rates, to be considered in determining whether to ship this or that kind of cargo by air. Saving in time, eliminating the handling costs attendant upon trans-shipping when goods are moved by surface means, and more inexpensive packing required for air cargo will help even up the higher air express rates, he claimed.

Most important of these, he stated, is the saving of time, especially in developing world markets. "A shipment which in the old days might have gone first by rail to a coastal shipping point, there to be trans-shipped by sea to a port in China and trans-shipped from there by rail to Chungking, may take wings and fly directly without trans-shipment from a metropolitan center here to Chungking in a matter of three days or so compared with at least five or six weeks by surface transportation."

Service to Small Cities

In another Oklahoma speech, CAB Chairman Pogue expressed his belief that the time has come for considering air service to small cities of 5000 or over. With small city service as yet an uncharted air transportation field, Pogue called attention to the numerous applications now filed with the Board for establishing local, feeder and pick-up service to communities in the 48 states as an indication of what the small-city public is demanding.

While it is the job of the Civil Aeronautics Board to investigate the proposed services and hold hearings on the applications, Pogue pointed out that the first and most important of the problems in solving small city air service is the development of suitable airplanes, a task for the aircraft manufacturing industry.

Surplus Aircraft

Commenting on the need for making plans for the peacetime handling of surplus military aircraft, Chairman Pogue, in a speech to an aviation forum held at the University of Southern California, declared that if the surplus aircraft on hand at the end of the war are simply peddled to the highest bidder, our progress in air transportation and aircraft development may be arrested for a decade. "The transport aircraft market will be glutted for years to come," he said.

Pointing out the rapidity with which aircraft become obsolete, he said that probably every plane in the class of surplus transport aircraft at the end of the war will be obsolete in terms of what our factories should then be capable of producing.

Indicating that adequate machinery should be set up now to handle the surplus aircraft problem, and that only the government as owner of the aircraft can take effective action, Chairman Pogue called attention to the fact that Congress already has before it a bill which will provide this machinery. (Introduced by Representative Clarence F. Lea of California, HR 2959 proposes to place in the Civil Aeronautics Board the responsibility for handling and disposing of surplus aircraft owned by the United States.

Examiner Suggests PAA Aeronaves Deal Needs Further Study

If the Civil Aeronautics Board follows the recommendations of its examiner J. Francis Reilly it will find that Pan American Airways, Inc.'s acquisition of 40 percent of the stock of the Mexican airline Aeronaves de Mexico requires Board approval and then it will investigate further to determine if the deal is in the public interest.

Reilly recently made his recommendations to the Board after having studied the facts behind an application for approval filed by Pan American.

According to testimony by Wilbur L. Morrison, general manager of Cia Mexicana de Aviacion (Pan American's wholly-owned Mexican subsidiary), and since the 40 percent stock transaction a member of the board of Aeronaves, Pan American is interested in the Aeronaves venture because, among other reasons, it feels that it would be healthier for the entire air transport industry in Mexico if a number of the smaller, under-financed airlines could be consolidated into one strong company.

Aeronaves was incorporated under Mexican law November 9, 1934, has been operating since then wholly within Mexico, and on December 31, 1942 its assets totaled 831,774.79 pesos. (About $166,355.)

New England Case First On The List For CAB Hearings

A hearing on eight new route applications which propose to complete and enlarge upon service in the New England area now covered by American Airlines came before the Board September 8. This case opens the first of the nearly 300 new route applications which the Board will consider under its latest policy of taking action on applications in the pending file.

Whether or not American will continue to have the exclusive right of service between New York and Boston, is one of the main issues to be decided in the case.

The eight applications for New England service, consolidated into one hearing to speed up the process, were made by Northwest, TWA, Colonial, American, TWA-New England, Seaboard Airways, Eastern, and United Airlines Transport Corporation.

The Board hearing of the Pan American-Grace Airways application for an air terminal in the United States is set for September 15. Pan American-Grace, now without a U. S. terminal, has asked authorization to come into Miami, Tampa, or St. Petersburg, Fla.

The Board has also reopened the Texas case which involves service proposed by Continental Airlines, Braniff Airways and American Airlines between El Paso and San Antonio; service between Austin and Houston proposed by Essair, Braniff and TWA; and feeder service proposed by Essair.

TWA and Western Granted New California Routes

In a supplemental decision recently issued in the so-called "North-South California Case," the Civil Aeronautics Board granted a certificate of public convenience and necessity to Western Airlines, to operate between Los Angeles and San Francisco, and reaffirmed that portion of the original decision issued on May 10 which granted to TWA an amendment to its certificate for route No. 37 to include Los Angeles as an intermediate point.

TWA is restricted in transporting local passengers between Los Angeles and San Francisco to its transcontinental schedules and in the supplemental decision the Board also restricted the amended certificate of TWA, prohibiting it from carrying local traffic between Las Vegas, Nev., and Los Angeles, which points are served by Western on its route from Los Angeles to Salt Lake City, Utah.

Prior to the issuance of these two certificates, United Air Lines Transport Corporation was the only airline operating between Los Angeles and San Francisco.

DOMESTIC AIR CARRIER OPERATIONS STATISTICS FOR THE YEAR 1942

Comparison of the Six-Month Periods and the Calendar Years of 1942 and 1941—Table A

	January-June 1942	January-June 1941	Percent of increase or decrease over 1941	July-December 1942	July-December 1941	Percent of increase or decrease over 1941	1942	1941	Percent of increase or decrease over 1941
Revenue miles flown	61,997,873	61,689,346	0.50	48,104,987	71,333,333	−32.56	110,102,860	133,022,679	−17.23
Revenue passengers carried	1,875,268	1,569,608	19.47	1,473,866	2,199,284	−32.98	3,349,134	3,768,892	−11.14
Revenue passenger miles flown	718,646,082	587,197,446	22.39	679,396,064	782,386,785	−13.16	1,398,042,146	1,369,584,231	2.08
Express carried (pounds)	16,317,713	7,804,508	109.08	23,783,944	11,405,163	108.54	40,101,657	19,209,671	108.76
Express pound-miles flown	9,498,986,026	4,310,824,619	120.35	13,936,222,899	6,174,233,386	125.72	23,435,208,925	10,485,058,055	123.51
Mail pound-miles flown [1]	17,446,925,509	11,843,805,332	47.31	24,686,328,311	13,957,003,759	76.87	42,133,253,820	25,800,809,091	63.30
Available passenger seat-miles flown	1,076,369,832	1,058,706,678	1.67	861,302,923	1,257,498,829	−31.51	1,937,672,755	2,316,205,507	−16.34
Revenue passenger load factor (percent)	66.77	55.46	20.39	78.88	62.22	26.78	72.15	59.13	22.02

[1] Includes mail pound-miles flown by Hawaiian Airlines, Ltd., which operates under a domestic air mail contract with the United States Post Office Department.

Operations by Routes—Table B

Operator	Routes operated	Months operated	Revenue miles flown	Revenue passengers carried	Revenue passenger miles flown	Express carried (pounds)	Express pound-miles flown	Mail pound-miles flown	Revenue passenger load factor (percent)
All American Aviation, Inc.	Pittsburgh, Huntington, Philadelphia, Williamsport, Jamestown, etc.	12	847,591	0	0	105,882	11,499,454	35,283,376	----
American Airlines, Inc.	Dallas to Los Angeles	12	6,192,665	100,758	92,440,194	1,209,855	1,360,502,171	3,372,849,986	
	New York to Chicago	12	5,621,684	218,631	81,381,085	4,883,423	2,180,561,508	1,258,663,856	
	Boston to New York	12	2,066,648	201,831	33,947,485	1,564,611	236,683,378	253,422,062	
	Boston to Cleveland	12	447,394	31,942	4,865,604	211,263	31,646,168	18,389,523	
	Cleveland to Nashville	12	859,665	62,091	12,158,068	603,990	152,063,815	157,298,338	
	New York to Fort Worth	12	7,933,519	239,646	114,593,776	2,196,218	1,379,727,055	3,097,505,247	
	Washington to Chicago	12	2,462,703	83,626	35,228,256	725,970	305,808,569	524,333,411	
	Chicago to Fort Worth	12	1,697,226	57,814	24,754,858	550,531	331,144,874	396,011,813	
	Buffalo to Toronto	12	52,571	4,585	341,999	14,072	1,048,077	1,059,702	
	Fort Worth or El Paso to Mexico City.	4	455,079	2,823	2,587,575	11,222	5,786,206	0	
	Total		27,789,154	1,003,747	402,298,900	11,971,155	5,984,971,821	9,079,533,938	74.17
Braniff Airways, Inc.	Chicago to Dallas	12	2,042,106	51,471	26,291,842	485,609	259,721,322	711,028,825	
	Amarillo to Brownsville	12	1,934,026	86,030	21,423,018	502,112	124,270,329	366,176,701	
	Houston to Corpus Christi	12	317,512	13,809	2,606,056	24,519	4,635,059	27,303,224	
	Total		4,293,644	151,310	50,320,916	1,012,240	388,626,710	1,104,508,750	67.34
Catalina Air Transport	Wilmington to Avalon	6	41,924	8,684	260,520	64,088	2,011,530	0	68.68
Chicago & Southern Air Lines, Inc.	Chicago to New Orleans	12	1,834,536	64,436	24,871,093	601,559	240,589,041	462,295,977	
	Memphis to Houston	12	359,734	10,134	3,567,061	54,719	23,510,677	58,983,396	
	Total		2,194,270	74,570	28,438,154	656,278	264,099,718	521,279,373	62.20
Continental Air Lines, Inc.	Denver to El Paso	12	1,142,641	26,244	7,514,150	94,852	29,177,488	90,857,321	
	Pueblo to Tulsa	12	510,199	12,003	2,808,962	17,099	4,978,052	33,525,138	
	Total		1,652,840	38,247	10,323,112	111,951	34,155,540	124,382,459	60.14
Delta Air Corporation	Charleston to Fort Worth	12	1,865,976	84,459	26,519,452	216,942	86,002,735	432,177,562	
	Atlanta to Cincinnati	12	510,147	22,892	6,837,095	87,513	26,665,043	105,126,252	
	Total		2,376,123	107,351	33,356,547	304,455	112,667,778	537,303,814	73.99
Eastern Air Lines, Inc.	New York to New Orleans	12	5,257,642	166,860	77,971,114	1,178,028	627,409,550	1,815,246,478	
	New York to Miami	12	6,716,429	164,541	86,070,326	1,839,346	1,420,330,631	2,974,639,133	
	New Orleans to Houston	9	715,428	24,682	8,331,931	132,495	44,270,458	0	
	Chicago to Jacksonville	12	2,295,926	85,213	34,540,759	697,068	319,156,781	782,908,022	
	Houston to San Antonio and Brownsville.	9	330,533	13,296	3,046,892	63,834	16,117,439	0	
	Atlanta to Tampa	11	792,544	22,628	7,059,943	115,734	45,562,220	103,936,909	
	St. Louis to Nashville	5	138,994	5,132	1,042,565	6,601	1,071,574	5,224,808	
	Total		16,247,496	482,352	218,063,530	4,033,106	2,473,888,653	5,681,955,350	70.01
Inland Air Lines, Inc.	Denver to Great Falls	12	618,345	9,177	2,776,009	37,359	6,763,265	26,532,806	
	Cheyenne to Huron	10	377,421	2,233	515,975	2,458	595,433	12,774,292	
	Total		995,766	11,410	3,291,984	39,817	7,358,698	39,307,098	36.32
Mid-Continent Airlines, Inc.	Minneapolis to Tulsa	12	1,103,939	23,584	6,416,375	106,668	25,006,085	128,387,024	
	Minneapolis to St. Louis	10	418,485	3,960	1,094,936	8,519	2,152,282	19,151,572	
	Total		1,522,424	27,544	7,511,311	115,187	27,158,367	147,538,596	45.86

Operations by Routes—Table B—Continued

Operator	Routes operated	Months operated	Revenue miles flown	Revenue passengers carried	Revenue passenger miles flown	Express carried (pounds)	Express pound-miles flown	Mail pound-miles flown	Revenue passenger load factor (percent)
National Airlines, Inc.	Jacksonville to Miami	12	716,857	28,768	6,415,024	127,218	26,779,897	97,008,785	
	Jacksonville to New Orleans	12	819,170	26,390	8,997,656	91,381	34,900,031	174,656,345	
	Total		1,536,027	55,158	15,412,680	218,599	61,679,928	271,665,130	73.59
Northeast Airlines, Inc.	Boston to Moncton	12	649,275	23,763	4,874,981	82,398	21,769,255	0	
	Boston to Montreal	12	139,203	2,683	508,190	4,894	916,444	24,974,704	
	Total		788,478	26,446	5,383,171	87,292	22,685,699	24,974,704	35.94
Northwest Airlines, Inc.	Chicago to Seattle	12	4,594,611	109,664	51,844,800	1,137,382	855,765,093	2,504,128,069	
	Minneapolis to Duluth	11	106,821	1,513	216,359	5,867	840,067	3,365,516	
	Total		4,701,432	111,177	52,061,159	1,143,249	856,605,160	2,507,493,585	65.42
Pennsylvania-Central Airlines Corp.	Norfolk to Detroit	12	2,630,156	199,827	41,594,331	2,170,814	424,428,030	566,886,062	
	Detroit to Milwaukee	12	425,056	30,291	4,871,251	124,106	20,903,499	16,439,573	
	Washington to Buffalo	5	184,522	6,541	1,564,641	36,540	5,452,761	6,228,981	
	Pittsburgh to Buffalo	12	170,204	9,077	1,808,346	35,644	6,741,748	3,937,125	
	Detroit to Sault Ste. Marie	4	85,368	1,144	262,900	3,932	334,474	1,469,009	
	Norfolk to Knoxville	5	126,909	3,356	733,580	6,687	1,212,340	5,015,189	
	Pittsburgh to Birmingham	12	482,411	13,494	4,142,736	29,554	8,761,306	22,148,054	
	Total		4,104,626	263,730	54,977,785	2,407,277	467,834,158	622,123,993	65.94
Transcontinental & Western Air, Inc.	New York to Los Angeles	12	11,615,430	253,781	142,685,879	5,005,078	3,739,018,368	5,893,419,908	
	Dayton to Chicago	12	313,642	17,012	3,612,771	350,098	63,976,653	47,503,178	
	Las Vegas to San Francisco	12	352,517	5,864	2,361,612	17,457	8,194,769	21,878,084	
	Phoenix to Las Vegas	5	81,495	2,723	577,089	3,631	451,898	1,155,188	
	Kansas City to Chicago and Pittsburgh	12	3,700,013	86,834	45,879,055	1,764,793	935,034,715	1,651,959,948	
	St. Louis to Detroit	12	528,901	35,678	6,667,280	223,378	47,479,890	32,704,093	
	Total		16,591,998	401,892	201,783,686	7,364,435	4,794,156,293	7,648,620,399	71.24
United Air Lines Transport Corp.	New York to San Francisco	12	15,186,554	245,907	186,789,489	7,077,189	6,423,565,892	11,277,876,156	
	Salt Lake City to Seattle	12	1,574,021	43,148	20,051,736	348,346	223,348,057	0	
	San Diego to Seattle	12	5,102,911	210,462	81,725,687	1,724,449	705,282,611	1,823,583,748	
	Cheyenne to Denver	5	90,079	3,311	324,478	29,871	2,927,398	6,709,920	
	Seattle to Vancouver	12	146,762	8,580	1,103,483	28,603	3,662,629	5,300,018	
	Total		22,100,327	511,408	289,994,873	9,208,458	7,358,786,587	13,113,469,842	81.96
Western Air Express, Inc.	San Diego to Salt Lake City	12	1,722,712	63,013	21,380,681	1,208,841	553,643,482	572,039,818	
	Salt Lake City to Great Falls	12	505,425	9,234	2,942,552	41,308	12,166,885	57,853,542	
	Great Falls to Lethbridge	12	90,603	1,861	240,585	8,039	1,212,464	2,471,454	
	Total		2,318,740	74,108	24,563,818	1,258,188	567,022,831	632,364,814	62.43
	Grand Total		**110,107,860**	**3,349,134**	**1,398,042,146**	**40,101,657**	**23,435,208,925**	[1] **42,133,253,820**	**72.15**

[1] Mail pound-miles flown by Hawaiian Airlines, Ltd., have been added to the total for domestic pound-miles flown as the mail carried by this company is under a domestic mail contract

Operations by Months—Table C

FIRST HALF

	January	February	March	April	May	June
Number of operating carriers *	17	17	17	17	17	17
Revenue miles flown	11,126,776	9,978,889	11,352,252	11,339,905	10,846,781	7,353,270
Revenue passengers carried	279,607	263,589	344,769	404,744	353,179	229,380
Revenue passenger miles flown	104,573,649	95,094,417	128,701,136	148,607,340	137,756,679	103,912,861
Express carried (pounds)	2,531,162	2,169,543	2,560,255	2,883,891	3,075,985	3,096,877
Express pound-miles flown	1,495,287,961	1,262,831,124	1,499,815,283	1,594,732,547	1,737,285,167	1,909,033,944
Mail pound-miles flown [1]	2,593,528,302	2,552,948,641	3,018,933,335	2,995,738,918	3,156,110,855	3,129,665,458
Available passenger-seat miles flown	191,165,471	170,479,305	193,318,005	196,363,869	188,824,086	136,279,096
Revenue passenger load factor (percent)	54.72	55.78	66.57	75.68	72.96	76.25

SECOND HALF

	July	August	September	October	November	December
Number of operating carriers	16	16	16	16	16	16
Revenue miles flown	8,079,138	8,451,428	8,098,555	8,407,566	7,776,768	7,291,532
Revenue passengers carried	251,101	270,466	262,354	262,913	231,521	195,511
Revenue passenger miles flown	110,863,824	121,554,021	120,690,100	124,053,751	108,778,509	93,455,859
Express carried (pounds)	3,533,980	3,926,991	4,374,884	4,340,553	3,973,689	3,633,847
Express pound-miles flown	2,214,673,097	2,360,707,776	2,458,451,844	2,504,515,277	2,305,768,848	2,092,106,057
Mail pound-miles flown [1]	3,442,923,698	3,661,421,999	3,870,283,599	4,334,959,342	4,337,909,595	5,038,830,078
Available passenger-seat miles flown	150,236,731	154,065,479	146,085,039	152,899,498	136,624,903	121,391,273
Revenue passenger load factor (percent)	73.79	78.90	82.62	81.13	79.62	76.99

[1] Includes mail pound-miles flown by Hawaiian Airlines, Ltd., which operates under a domestic air mail contract with the United States Post Office Department.
* Catalina suspended operations in June, 1942.

Domestic Air Carrier Operations Statistics for the Month of June 1943

Operator	Routes operated	Revenue miles flown	Revenue passengers carried [1]	Revenue passenger miles flown	Express carried (pounds)	Express pound miles Flown	Passenger seat-miles flown	Revenue passenger load factor (percent)
All American Aviation, Inc.	Pittsburgh, Huntington, Philadelphia, Williamsport, Jamestown, etc.	89,503	0	0	12,108	1,442,180	0	.....
American Airlines, Inc.	Dallas to Los Angeles	613,144	14,339	11,384,109	182,657	192,657,130	12,008,004	94.80
	New York to Chicago	416,507	19,630	6,933,747	755,107	305,629,351	7,779,970	89.12
	Boston to New York	114,974	12,026	2,039,760	279,011	43,318,405	2,257,172	90.37
	Boston to Cleveland	18,618	2,019	286,355	40,725	8,155,896	379,884	75.38
	Cleveland to Nashville	59,673	4,923	1,077,467	98,295	25,409,776	1,243,222	86.67
	New York to Fort Worth	602,024	18,925	10,719,340	258,476	154,801,287	11,570,054	92.65
	Washington to Chicago	165,015	6,686	2,827,613	115,377	48,027,053	3,036,518	93.12
	Chicago to Fort Worth	112,986	4,123	2,080,766	75,219	50,332,814	2,239,522	92.91
	Buffalo to Toronto	4,256	657	49,932	4,021	305,596	88,312	56.54
	El Paso or Fort Worth to Mexico City	128,476	1,878	1,769,006	10,446	10,492,258	2,257,783	78.35
	Total	2,235,673	85,206	39,168,095	1,819,334	839,129,566	42,860,441	91.39
Braniff Airways, Inc.	Chicago to Dallas	173,002	5,373	2,996,363	79,565	50,403,313	3,173,196	94.43
	Amarillo to Brownsville	122,327	7,809	2,002,971	41,085	11,150,148	2,223,690	90.07
	Total	295,329	13,182	4,999,334	120,741	61,553,461	5,396,886	92.63
Chicago & Southern Air Lines, Inc.	Chicago to New Orleans	156,619	6,252	2,603,378	65,861	30,199,046	2,995,574	86.91
	Memphis to Houston	32,248	1,478	485,460	8,745	3,864,632	590,779	82.17
	Total	188,867	7,730	3,088,838	74,606	340,063,678	3,586,353	86.13
Continental Air Lines, Inc.	Denver to El Paso	96,042	3,245	1,038,787	5,971	2,426,991	1,136,566	91.40
	Wichita, Tulsa to Pueblo	38,711	1,506	372,370	2,861	449,348	434,560	85.69
	Total	134,753	4,751	1,411,157	8,832	2,876,339	1,571,126	89.82
Delta Air Corporation	Charleston & Savannah to Fort Worth	126,894	6,524	2,463,414	29,646	13,261,522	2,644,003	93.17
	Atlanta to Cincinnati	45,745	2,807	900,847	18,987	6,052,669	951,941	94.63
	Total	172,639	9,331	3,364,261	48,633	19,314,191	3,595,944	93.56
Eastern Air Lines, Inc.	New York to Brownsville	410,982	12,892	7,523,832	127,084	64,955,953	8,250,633	91.19
	New York to Miami	504,523	12,822	7,068,617	162,943	126,011,813	8,655,437	81.67
	Chicago to Jacksonville	169,530	7,602	3,094,722	75,845	33,663,970	3,354,032	92.27
	Atlanta to Tampa	25,740	1,257	476,474	9,228	3,443,943	540,111	88.22
	Total	1,110,775	34,573	18,163,645	375,100	228,075,679	20,800,213	87.32
Inland Air Lines, Inc.	Denver to Great Falls	35,058	672	263,544	696	246,852	373,718	70.52
	Cheyenne to Huron	19,513	0	0	142	20,665	0	.....
	Total	54,571	672	263,544	838	267,517	373,718	70.52
Mid-Continent Airlines, Inc.	Minneapolis to Tulsa	63,410	2,042	555,473	12,668	2,830,398	813,127	68.31
	Minneapolis to St. Louis, Des Moines, and Kansas City.	39,018	657	184,380	1,375	344,344	353,820	52.11
	Total	102,428	2,699	739,853	14,043	3,174,742	1,166,947	63.40
National Airlines, Inc.	Jacksonville to Miami	48,630	2,428	566,112	12,408	2,454,512	677,244	83.59
	Jacksonville to New Orleans	60,900	2,146	789,280	15,819	6,784,276	843,893	93.53
	Total	109,530	4,574	1,355,392	28,227	9,238,788	1,521,137	89.10
Northeast Airlines, Inc.	Boston to Presque Isle & Moncton	64,674	3,782	942,941	7,987	1,697,916	1,339,686	70.38
Northwest Airlines, Inc.	Chicago to Seattle	318,812	10,522	5,185,475	101,664	62,749,042	5,790,209	89.56
	Minneapolis to Duluth	5,720	0	0	417	59,631	0	.....
	Total	324,532	10,522	5,185,475	102,081	62,808,673	5,790,209	89.56
Pennsylvania-Central Airlines Corp.	Norfolk to Detroit	165,896	15,039	3,145,339	325,318	60,497,429	3,435,461	91.56
	Detroit to Milwaukee	15,080	1,549	251,054	20,768	4,014,809	316,646	79.29
	Pittsburgh to Buffalo	13,080	1,110	215,086	9,943	1,523,270	274,680	78.30
	Pittsburgh to Birmingham	38,520	1,891	614,143	5,483	1,756,335	805,882	76.21
	Total	232,576	19,589	4,225,622	361,512	67,891,843	4,832,669	87.44
Transcontinental & Western Air, Inc.	New York to Los Angeles	953,885	24,312	15,202,380	602,968	412,514,339	16,300,784	93.26
	Dayton to Chicago	15,180	1,262	258,949	60,679	12,690,192	296,216	87.42
	Boulder City to San Francisco	30,604	913	363,602	6,457	3,239,560	553,618	65.68
	Kansas City to Chicago & Pittsburgh	281,830	8,222	4,312,627	188,453	97,847,603	4,449,436	96.93
	St. Louis to Detroit via Cincinnati & Dayton.	52,340	3,914	902,069	47,902	10,498,242	970,846	92.92
	Total	1,333,839	38,623	21,039,627	906,459	536,789,936	22,570,900	93.22
United Air Lines Transport Corporation.	New York to San Francisco	1,290,935	24,182	21,368,124	717,914	602,780,555	23,031,937	92.78
	Salt Lake to Seattle	97,048	3,224	1,808,903	23,251	15,018,438	2,103,263	86.00
	Seattle to San Diego	393,793	18,915	7,674,921	136,340	58,671,730	8,113,266	94.60
	Seattle to Vancouver	14,848	1,718	222,360	5,822	725,326	315,030	70.58
	Total	1,796,624	48,039	31,074,308	883,327	677,196,049	33,563,496	92.58
Western Air Lines, Inc.	San Diego to Salt Lake City	129,917	5,528	2,439,828	69,269	33,566,905	2,633,829	92.63
	Salt Lake City to Great Falls	29,281	922	343,359	1,014	302,597	408,608	84.03
	Great Falls to Lethbridge	4,950	222	26,891	37	3,842	60,936	44.13
	Total	164,148	6,672	2,810,078	70,320	33,873,344	3,103,373	90.55
	Grand total	8,410,461	289,945	137,832,170	4,834,148	2,579,393,902	152,073,098	90.64

[1] Where a company operates more than one route, the passengers carried may be duplicated between routes.
Passengers carried (total revenue and non-revenue) 297,760. Passenger miles flown (total revenue and non-revenue) 140,745,710.

Domestic Air Carrier Operations Statistics for the First Six Months of 1943 as Compared With the Same Period of 1942

Operator	Revenue miles flown (January–June)		Revenue passengers carried (January–June)		Revenue passenger miles flown (January–June)		Express carried (pounds) (January–June)	
	1943	1942	1943	1942	1943	1942	1943	1942
All American Aviation, Inc	498,076	401,756	0	0	0	0	55,814	39,511
American Airlines, Inc	12,693,266	15,107,029	434,144	565,604	206,955,210	208,618,010	9,310,690	4,525,354
Braniff Airways, Inc	1,834,597	2,588,295	76,364	81,584	28,752,547	26,162,001	629,035	431,542
Catalina Air Transport	0	41,924	0	8,684	0	260,520	0	64,088
Chicago & Southern Air Lines, Inc	1,065,074	1,204,318	41,699	38,108	16,391,249	14,271,130	386,071	228,286
Continental Air Lines, Inc	738,316	902,993	24,385	17,762	7,031,237	4,556,563	52,313	31,382
Delta Air Corporation	1,002,062	1,389,190	50,304	56,587	18,593,810	16,337,254	277,640	129,215
Eastern Air Lines, Inc	6,477,819	9,713,634	194,766	295,625	103,426,744	124,166,288	2,163,093	1,817,303
Inland Air Lines, Inc	387,907	633,087	5,037	6,849	1,748,699	1,712,958	13,858	13,382
Mid-Continent Airlines, Inc	568,436	1,014,619	12,322	18,008	3,415,844	4,742,860	61,066	43,954
National Airlines, Inc	798,740	789,852	31,656	25,895	9,609,772	6,992,837	160,283	98,673
Northeast Airlines, Inc	297,146	459,433	13,465	15,141	3,328,494	2,792,826	34,511	38,004
Northwest Airlines, Inc	1,844,409	2,719,441	47,326	63,995	23,475,878	27,786,564	720,439	473,061
Pennsylvania-Central Airlines Corporation	1,319,968	2,772,824	99,761	164,831	21,645,739	33,615,636	1,803,333	1,097,340
Transcontinental & Western Air, Inc	7,604,420	8,978,036	194,669	208,274	106,628,252	97,433,152	4,901,140	2,743,245
United Air Lines Transport Corporation	10,193,245	11,915,220	248,370	269,585	158,071,767	137,446,861	4,744,440	3,979,163
Western Air Lines, Inc	909,531	1,366,222	34,856	38,736	13,778,245	11,750,622	475,318	564,210
Total	48,233,012	61,997,873	1,509,124	1,875,268	722,853,487	718,646,082	25,789,044	16,317,713
Index (1942=100)	77.79	100.00	80.48	100.00	100.59	100.00	158.04	100.00

Operator	Express pound miles flown (January–June)		Passenger seat miles flown (January–June)		Revenue passenger load factor (percent) (January–June)	
	1943	1942	1943	1942	1943	1942
All American Aviation, Inc	7,014,008	4,131,111	0	0		
American Airlines, Inc	4,470,537,315	2,245,246,920	241,754,749	289,271,802	71.54	72.12
Braniff Airways, Inc	307,350,104	183,643,961	31,918,632	43,440,433	90.08	60.23
Catalina Air Transport	0	2,011,530	0	379,320		68.68
Chicago & Southern Air Lines, Inc	172,773,585	89,964,593	20,424,314	25,186,860	80.25	56.66
Continental Air Lines, Inc	16,705,596	9,232,541	8,313,117	9,218,064	84.58	49.43
Delta Air Corporation	106,366,028	47,174,444	21,014,914	24,157,949	88.48	67.63
Eastern Air Lines, Inc	1,364,926,478	1,102,276,317	120,947,042	188,135,110	85.51	66.00
Inland Air Lines, Inc	3,249,950	2,930,856	2,816,381	6,155,050	62.09	27.83
Mid-Continent Airlines, Inc	14,106,479	10,779,294	5,499,159	11,458,197	62.12	41.39
National Airlines, Inc	38,687,432	24,604,989	11,128,177	10,489,184	86.36	66.67
Northeast Airlines, Inc	7,488,043	8,691,156	6,232,313	9,059,233	53.41	30.83
Northwest Airlines, Inc	491,984,625	354,939,348	29,576,537	45,889,554	79.37	60.55
Pennsylvania-Central Airlines Corporation	336,466,745	222,335,041	27,338,873	55,599,721	79.18	60.46
Transcontinental & Western Air, Inc	2,926,141,663	1,704,341,681	122,678,417	155,956,598	86.92	62.47
United Air Lines Transport Corporation	3,660,177,152	3,215,920,909	177,071,116	180,072,241	89.27	76.33
Western Air Lines, Inc	206,472,029	251,761,335	16,518,335	21,900,516	83.41	53.65
Total	14,130,447,232	9,479,986,026	843,232,076	1,076,369,832	85.72	66.77
Index (1942=100)	149.06	100.00	78.34	100.00	128.38	100.00

	January	February	March	April	May	June	Total
Passengers carried (total revenue and non-revenue)	208,380	233,049	265,175	280,913	282,103	297,760	1,567,380
Passenger miles flown (total revenue and non-revenue)	101,410,602	110,982,551	124,256,467	132,984,531	133,266,615	140,745,710	743,646,476

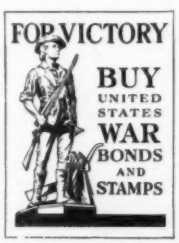
Washington Airport Gets New Manager

CAA Administrator Charles I. Stanton has appointed Hervey F. Law, manager of Washington National Airport to succeed John Groves, who is joining the Air Transport Association after managing the airport since March, 1941. The CAA operates the National airport.

Law, previously a regional supervisor of airports for the CAA, was born in Springfield, Mass., in 1898 and began his aviation career in 1914 when he built and flew his own glider. In 1917 he became a civilian flying instructor with the Army Air Corps at Mineola, N. Y. He is a graduate of Massachusetts State College, is married and has three children. Before entering the government civil aviation field, Law was an engineering draftsman with the Wright-Martin Aircraft Corp. He has been with the government since 1933.

New Post Created

A newly created position of Assistant Executive Officer for the CAA has been filled by the transfer of E. R. Ryan from the position of Special Assistant to the Director of Federal Airways. Among the duties assigned to the Assistant Executive Officer is that of coordinating instructions issued from the Washington Office on administrative matters.

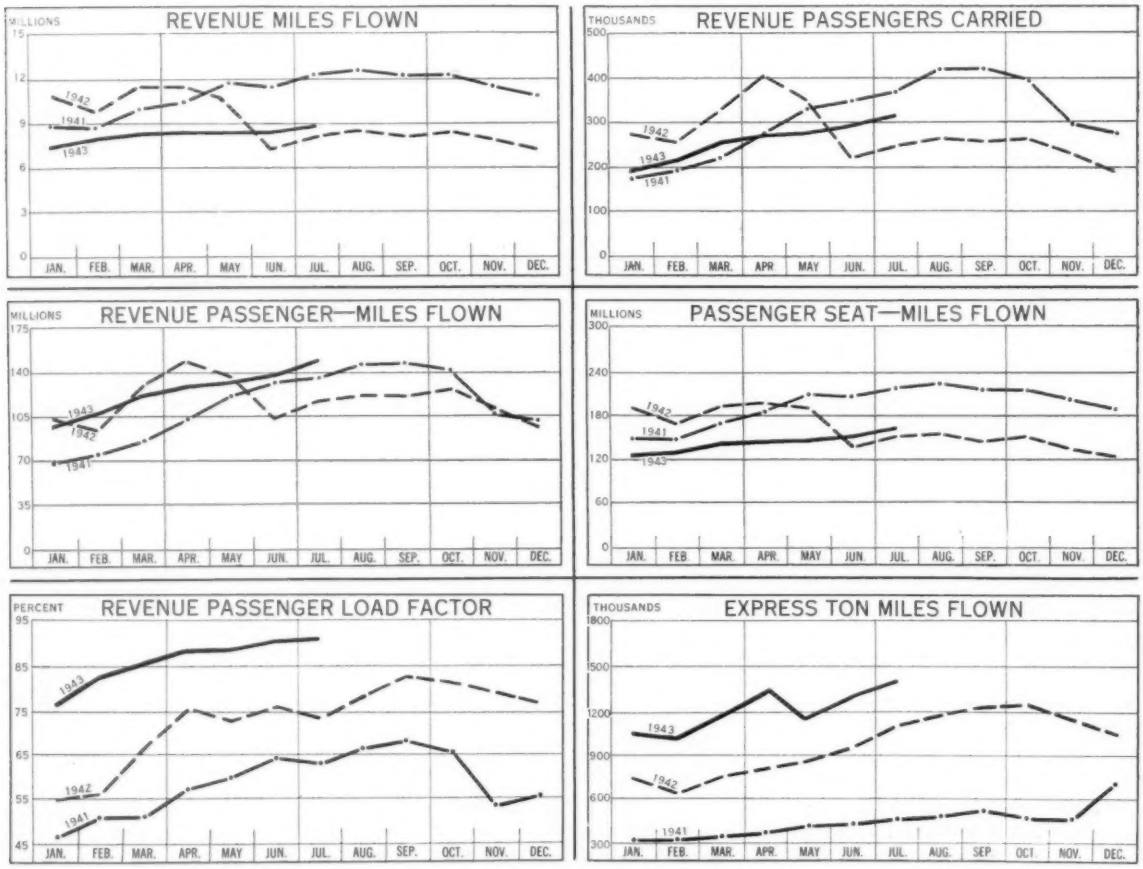


CAA Appoints New Development Head

Donald M. Stuart has been appointed Chief of the Technical Development Division of the Civil Aeronautics Administration. In this capacity he will have charge of CAA experimental work on aircraft, radio, airports, charts and other projects.

After a year as research engineer for the Northwest Paper Company, he joined the National Bureau of Standards, and when that agency's work in the field of aviation radio was shifted in 1934 to the Bureau of Air Commerce, he transferred to the latter organization. He has served with it and its successor agencies ever since, his last position being that of chief airways inspector. Stuart is qualified as a radio as well as a chemical engineer. He succeeds John Easton, who resigned to join the Whiting Corporation.

Comparative Charts of Domestic Operations for 1941, 1942, and the First Seven Months of 1943



H. S. Students Get Second Chance In CAA Private Pilot Exams

Secondary school students of preflight aeronautics had their first opportunities to take the CAA examinations on aeronautical knowledge in January and May–June, 1943. Thousands of boys and girls passed the examinations, thus meeting one of the requirements for the private pilot certificate.

Reexaminations

Arrangements have now been completed to examine students who failed one or more sections of the examination in June. These examinations may be given in the local high schools between September 1 and October 23.

The students will be examined in the same manner as all other candidates, except that on the application form they shall be designated as reexaminees. Likewise, passing grades received by reexaminees on any of the four sections of the examination will be valid the same as for new examinees, and will be carried forward on Civil Aeronautics Administration records for a period of 12 months from the date of the examination.

15 Days Leeway

Future examinations and reexaminations will be offered regularly in January, May–June, and September of each year, as previously announced. However, the time elapse between filing the application and the date of the examination has been changed from 30 to 15 days. Application must now be on file with CAA at least 15 days before the examination is given.

Forms for requesting new examinations or reexamination, identified as Form ACA 1159, may be obtained by the individual schools as heretofore from state departments of education, CAA regional or district offices, or from the National Catholic Welfare Conference, Washington, D. C.

Correction to March Statistical Report

Make the following corrections in the Domestic Air Carrier Operation Statistics carried on pages 81 and 82 of the June 15, 1943 issue of the Journal: Change the revenue miles flown figure on page 81 for All American Aviation, Inc. from 86,489 to 86,049; substitute 235,550 for 235,990 revenue miles flown in the 1943 column on page 82.

Teletype Editor

(*Continued from page 113*)

S. Porter, senior airway controller of the Washington center, is now on trial in test operations. As the result of the test CAA expects to draw up plans and specifications for making the mechanism a standard piece of equipment for use in other airway traffic control centers and possibly in airway communications stations. Two units have been constructed.

This is an example of suggestions for improvements which ATC is encouraging their personnel to make in their new "suggestion plan."

Orders

ORDER No. 2380 ..... *August 2, 1943*
Revoked student pilot certificates held by Orvil D. Bass for violation of the Civil Air Regulations.

ORDER No. 2381 ..... *August 2, 1943*
Temporarily suspended flight instructor rating held by Oliver N. Withington for certain violations of the Civil Air Regulations.

ORDER No. 2382 ..... *August 2, 1943*
Dismissed complaint against Simmons L. Cheek, Jr., for certain violations of the Civil Air Regulations.

ORDER No. 2383 ..... *August 2, 1943*
Waived Sections 20.126 and 20.127 of the Civil Air Regulations in the matter of the application of Marian C. Cody.

ORDER No. 2384 ..... *August 2, 1943*
Denied petition for modification of order No. 2128 which revoked flight instructor rating held by Betty Lund.

ORDER No. 2385 ..... *August 3, 1943*
Rescinded certain parts of orders 1756 and 1811 insofar as they authorized temporary suspension of service on a portion of route No. 48 by Mid-Continent Airlines, Inc.

ORDER No. 2386 ..... *August 4, 1943*
Withheld from publication certain testimony and exhibits re compensation for transportation of mail by Northwest Airlines, Inc., over routes 3 and 45.

ORDER No. 2387 ..... *August 4, 1943*
Revoked commercial pilot certificate held by Herbert E. Mercer for certain violations of the Civil Air Regulations.

ORDER No. 2388 ..... *August 4, 1943*
Revoked student pilot certificate held by James A. D'Ostroph for certain violations of the Civil Air Regulations.

ORDER No. 2389 ..... *August 4, 1943*
Inaugurated service between the terminal points Dayton, Ohio, the intermediate points Columbus, Ohio, and Wheeling, W. Va., and the terminal point Washington, D. C., on route 61, by Transcontinental & Western Air, Inc.; inaugurated service between the terminal point Toledo, Ohio, and the terminal point Washington, D. C., on route 62, by United Air Lines Transport Corp.

ORDER No. 2390 ..... *August 4, 1943*
Withheld from public disclosure certain testimony and exhibits re compensation for transportation of mail by Braniff Airways, Inc., over routes 9, 15, and 50; re rates, fares, and charges of American Airlines, Inc., et al. for the transportation of passengers.

ORDER No. 2391 ..... *August 3, 1943*
Denied exemption to Universal Air Freight Corp. for a permanent certificate of public convenience and necessity under sec. 401 of the Civil Aeronautics Act of 1938.

ORDER No. 2392 ..... *August 5, 1943*
Directed Continental Air Lines, Inc. to show cause why the Board should not make final their findings and conclusions and upon the basis thereof, fix, determine and publish the fair and reasonable rates of compensation for transporation of mail over routes 29, 43, and 60.

ORDER No. 2393 ..... *August 5, 1943*
Reopened for reconsideration and reargument order 2265 insofar as it deferred decision upon the applications of Essair, Inc.

ORDER No. 2394 ..... *August 11, 1943*
Granted permission to American Airlines, Inc. for expeditious use of Palm Springs Army Air Base so as to serve Palm Springs, Calif.

ORDER No. 2395 ..... *August 11, 1943*
Granted permission to Braniff Airways, Inc. for expeditious use of Laredo Army Air Field so as to serve Laredo, Tex.

ORDER No. 2396 ..... *August 11, 1943*
Rescinded order 2121 insofar as it authorized the temporary suspension of service between San Antonio and Laredo, Tex.

ORDER No. 2397 ..... *August 11, 1943*
Granted permission to Transcotinental & Western Air, Inc. and United Air Lines Transport Corp. for expeditious use of Washington National Airport so as to serve Washington, D. C.

ORDER No. 2398 ..... *August 10, 1943*
Consolidated applications of Braniff Airways, Inc., docket 906, and American Airlines, Inc., docket No. 924, for further public hearing re temporary air transportation service between El Paso and San Antonio, Tex.

ORDER No. 2399 ..... *August 13, 1943*
Revoked student pilot certificate held by James D. Fields for violation of the Civil Air Regulations.

ORDER No. 2400 ..... *August 13, 1943*
Temporarily suspended flight instructor rating held by Richard F. Schwabe for certain violations of the Civil Air Regulations.

ORDER No. 2401 ..... *August 14, 1943*
Granted permission to United Air Lines Transport Corp. for expeditious use of Monterey Peninsula Airport so as to serve Monterey, Calif.

ORDER No. 2402 ..... *August 16, 1943*
Revoked order 1753 re application of Delta Air Corps, for an order authorizing temporary suspension of service to and from Meridian, Miss.

ORDER No. 2403 ..... *August 16, 1943*
Approved cancellation of Agreements (Contracts CAB 100, 100A and 196) filed under sec. 412 (a) of the Act by and between United Air Lines Transport Corp. and Western Air Lines, Inc., for the temporary loan of airplanes for emergency use.

ORDER No. 2404 ..... *August 16, 1943*
Authorized inauguration of service by Delta Air Corp. between New Orleans, Baton Rouge, Alexandria, and Shreveport, La., on route 24, pursuant to order 2273.

ORDER No. 2405 ..... *August 18, 1943*
Revoked student pilot certificate held by Oscar V. Wright for certain violations of the Civil Air Regulations.

ORDER No. 2406 ..... *August 18, 1943*
Temporarily suspended student pilot certifiacte held by Vernon R. Spitaleri for violation of the Civil Air Regulations.

ORDER No. 2407 ..... *August 18, 1943*
Revoked student pilot certificate held by Chester R. Huckaby for certain violations of the Civil Air Regulations.

ORDER No. 2408 ..... *August 18, 1943*
Revoked private pilot certificate held by Jack N. Bleecker for certain violations of the Civil Air Regulations.

ORDER No. 2409 ..... *August 13, 1943*
Further amended certificate of public convenience and necessity of Transcontinental and Western Air, Inc., for route 37; ordered that Western Air Lines, Inc., be issued a certificate of public convenience and necessity authorizing it to engage in air transportation between the terminal points Los Angeles and San Francisco, Calif. (Opinion and order.)

ORDER No. 2410 ..... *August 20, 1943*
Revoked commercial pilot certificate held by David W. Wehman for certain violations of the Civil Air Regulations.

ORDER No. 2411 ..... *August 20 1943*
Temporarily suspended private pilot certificate held by Raymond P. Betzoldt for certain violations of the Civil Air Regulations.

ORDER No. 2412 ..... *August 23, 1943*
Granted temporary exemption to Richard E. Lee and Allan W. Lee, copartners doing business under the name of Alaska Central Airlines, from the provisions of sec. 401 (a) of the Civil Aeronautics Act of 1938, as amended, pursuant to sec. 416 (b) of the Act.

ORDER No. 2413 ..... *August 24, 1943*
Permitted resumption of service by American Airlines, Inc., to and from Texarkana, Ark.

ORDER No. 2414 ..... *August 24, 1943*
Denied application of Pennsylvania-Central Airlines Corp. for a certificate of public convenience and necessity authorizing service between Washington, D. C., and Boston, Mass.

ORDER No. 2415 ..... *August 26, 1943*
Amended order 2366 so as to authorize American Airlines, Inc., to haul members of the armed forces of the Allied Nations to and from Palm Springs, California.

ORDER No. 2416 ..... *August 26, 1943*
Granted the E. W. Wiggins Airways, Inc., permission to intervene re applications of certain airlines for certificates

and for amendments of certificates of public convenience and necessity under sec. 401, and for approval of control under sec. 408 of the Civil Aeronautics Act of 1938, as amended.

ORDER No. 2417..... *August 23, 1943*

Dismissed applications of Boston and Maine Railroad and Maine Central Railroad Company with respect to their interest in Northeast Airlines, Inc., under sec. 408 of the Civil Aeronautics Act of 1938, as amended. (Opinion and order.)

ORDER No. 2418..... *August 27, 1943*

Temporarily suspended aircraft dispatcher certificates held by Roy W. Klotz for certain violations of the Civil Air Regulations.

ORDER No. 2419..... *August 27, 1943*

Temporarily suspended commercial pilot certificate held by Jesse A. Blevans for certain violations of the Civil Air Regulations.

ORDER No. 2420..... *August 27, 1943*

Dismissed application of Samuel J. Solomon and Northeast Airlines, Inc., for approval of interlocking relationships under sec. 409 (a) of the Civil Aeronautics Act of 1938, as amended.

ORDER No. 2421..... *August 27, 1943*

Approved interlocking relationships in the matter of the application of C. E. Woolman and Delta Air Corp.

ORDER No. 2422..... *August 30, 1943*

Temporarily suspended student pilot certificate held by Gerald H. Pocklington for certain violations of the Civil Air Regulations.

ORDER No. 2423..... *August 31, 1943*

Amended certificate of public convenience and necessity issued to All American Aviation, Inc., so as to authorize them to engage in air transportation to and from Ripley, W. Va., as an intermediate point between the intermediate points Spencer and Charleston, W. Va.

Regulations

REGULATION No. 281..... *August 2, 1943*

Effective August 2, 1943:

Regulation Serial Number 260 is hereby amended by adding subparagraph (e) to read as follows:

(e) Municipal Airport, Burlington, Vermont. All turns by aircraft approaching for a landing or after take-off to the north, southeast, and west shall be made to the right.

REGULATION No. 282..... *August 6, 1943*

Effective August 6, 1943.

Notwithstanding section 40.2611 (b) of the Civil Air Regulations, any first pilot listed in the American Airlines Airman Operations Specifications on August 10, 1943 who is qualified as competent to operate an aircraft in scheduled air transportation between Phoenix, Arizona, and Los Angeles, California, on August 10, 1943, may pilot aircraft in scheduled transportation for said carrier into and out of the Army Base Airport, Palm Springs, California, upon furnishing evidence to the Administrator showing that the pilot is thoroughly familiar with the form and condition of the airport and with the location and nature of any obstructions in the vicinity.

REGULATION No. 283..... *August 16, 1943*

Effective August 16, 1943.

AMENDMENT No. 1 TO SECTION 280.1 OF THE ECONOMIC REGULATIONS—REPORTS OF OWNERSHIP OF STOCK AND OTHER INTERESTS BY OFFICERS AND DIRECTORS OF AIR CARRIERS

Effective August 16, 1943, section 280.1 of the Economic Regulations is amended in its entirety.*

REGULATION No. 284..... *August 25, 1943*

Effective August 25, 1943, section 238.1 of the Economic Regulations is hereby amended in its entirety to read as follows:

SECTION 238.1 OF THE ECONOMIC REGULATIONS—APPLICATIONS FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY

(a) *Formal requirements of applications.* Applications for certificates of public convenience and necessity or amendments thereof, shall meet the requirements set forth in section 285.3 of the Economic Regulations as to (1) execution, number of copies and service; (2) verification; and (3) formal specifications of papers. All pages of an application shall be consecutively numbered and the application shall clearly describe and identify each exhibit by a separate number or symbol. All exhibits shall be deemed to constitute a part of the application to which they are attached.

(b) *Amendments to application.* If, after receipt of any application, the Board shall request the applicant to supply it with additional information, such information shall be furnished in the form of an amendment to the original application. All amendments to applications shall be consecutively numbered and shall comply with the requirements of this Regulation as to form, number of copies, verification, and in all other essential respects.

(c) *Incorporation by reference.* In general it is desirable that incorporation by reference shall be avoided. However, where two or more applications are filed by a single carrier, lengthy exhibits or other documents attached to one may be incorporated in the others by reference if that procedure will substantially reduce the cost to the applicant.

(d) *General provisions concerning contents.* The statements contained in an application shall be restricted to significant and relevant facts. They shall be free from argumentation or from expressions of opinion, except such as may be required by this Regulation.

Requests for authority to engage in air transportation between points in the continental United States and requests for authority to engage in air transportation to or from any point outside the continental United States shall not be included in the same application.

Each application shall give full and adequate information with respect to each of the items set forth in this paragraph. In addition, the application may contain such other information and data as the applicant shall deem necessary or appropriate in order to acquaint the Board fully with the particular circumstances of its case. Among other things, every such application shall contain the following information:

(1) The full name and address of the applicant, the nature of its organization (individual, partnership, corporation, etc.) and the name of the State under the laws of which it is organized.

(2) A statement that the applicant is a citizen of the United States, as defined by section 1 (13) of the Act. It is not required that the application shall contain all the evidence which the applicant is prepared to present at the hearing or otherwise in support of such statement, but the application shall at least indicate the nature and result of its investigations in that matter and the character of the evidence it will be prepared to present in support of citizenship.

(3) An adequate identification of each route for which a certificate is desired, specifying the type or types of service (mail, passengers, and property) to be rendered on each such route, and whether or not such services are to be rendered in scheduled operations. The identification of each route shall name every terminal and intermediate point to be included in the certificate for which application is made.

(4) A map (which may be attached as an exhibit) drawn approximately to scale showing all terminal and intermediate points to be served, giving the approximate mileages between all adjacent points, and the principal over-all distances.

(5) A statement as to the type of aircraft applicant proposes to use in the new service and whether such aircraft is presently owned by the applicant.

(6) If applicant does not hold a certificate of public convenience and necessity authorizing air transportation, the name and type of business of any affiliate, subsidiary, or principal stockholder of applicant engaged in any form of transportation as a common carrier or engaged in any phase of aeronautical activity.

(e) *Applications for operations other than between fixed points.* An application for a certificate authorizing operations other than between fixed points, or not having terminal or intermediate points capable of precise description, need comply with the provisions of clauses 3 and 4 of paragraph (d) of this Regulation only to the extent that it shall clearly describe the authorization sought by the applicant.

REGULATION No. 285..... *August 25, 1943*

AMENDMENT No 1 OF SECTION 285.4 OF THE ECONOMIC REGULATIONS—APPEARANCES BY THIRD PERSONS AND FORMAL INTERVENTIONS

Effective August 25, 1943 section 285.4 of the Economic Regulations is hereby amended to read as follows:

SECTION 285.4—APPEARANCES BY THIRD PERSONS AND FORMAL INTERVENTIONS

(a) *Appearances.* Any person, including any state, political subdivision thereof, state aviation commission, or other public body, may appear at any hearing and present any evidence which is relevant to the issues. Such persons may also suggest questions or interrogatories to be propounded by public counsel to witnesses called by other persons. With the consent of the examiner, or of the Board, if the hearing is held before the Board, such persons may also cross-examine witnesses directly.

(b) *Formal interventions.* Any person having a substantial interest in the subject matter of any proceeding may petition for leave to intervene in such proceeding and become a party thereto upon compliance with the provisions of this paragraph. In general, such petitions will not be granted unless the Board, or, in appropriate cases, the examiner, shall find,

(1) that such person has a statutory right to be made a party to such proceeding; or,

(2) that such person will or may be bound by the order to be entered in the proceeding; or,

(3) that such person has a property or financial interest which may not be adequately represented by existing parties, if such intervention would not unduly broaden the issues or delay the proceeding.

However, the denial of such a petition for leave to intervene shall not prevent the petitioner from participating in the proceeding in the manner described in paragraph (a) of this section.

Unless otherwise ordered by the Board, every petition for leave to intervene shall be filed with the Board not later than 10 days prior to the hearing, or in the event that a prehearing conference is to be held pursuant to section 285.10 of the Economic Regulations, such petition shall be filed prior to the first such conference. Copies of the petition shall be mailed or delivered to each party to the proceeding prior to the filing of the petition. The Board, however, may pass upon any such petition without receiving testimony or argument either from the petitioner or from other parties to the proceeding. The petition shall clearly set forth the interest of the petitioner, and shall otherwise comply with the requirements of section 285.3 of the Economic Regulations.

No petition for leave to intervene, not filed within the time limited by the preceding paragraph of this subsection, will be entertained by the Board or the examiner unless the petitioner shall clearly show good cause for his failure to file such petition within the time

(*See Regulations page 126*)

*The phrase "amended in its entirety" here consists of substituting "Civil Aeronautics Board" for "Civil Aeronautics Authority" and "Board" for "Authority", a few changes in a sub-section under "Information to be Reported", and substitution of a simpler "Form of Oath". Section 280.1 remains substantially the same.

STATUS OF AIR REGULATIONS

Regulations as of August 1, 1943

HOW TO OBTAIN PARTS, AMENDMENTS, AND MANUALS

THOSE PARTS AND MANUALS ON WHICH A PRICE IS LISTED IN THE TABULATION WHICH FOLLOWS ARE ON SALE AT THE GOVERNMENT PRINTING OFFICE (SHOWN AS GPO IN TABLE), AND ARE NOT AVAILABLE FOR FREE DISTRIBUTION FROM THE CAA.

The Government Printing Office is the official sales agency for all government publications and is separate and distinct from the CAA and the Department of Commerce. The rules of the Superintendent of Documents require that *remittances be made in advance* of shipment of publications, either by coupons, sold in sets of 20 for $1 and good until used, or by check or money order payable to the *Superintendent of Documents, Government Printing Office.* Currency is sent at sender's risk. Postage stamps, foreign money, and smooth coins are not acceptable. A discount of 25 percent is allowable to book dealers and quantity purchasers of 100 or more publications, on condition that the purchasers will adhere to the public sales price set by the Superintendent of Documents and that publications shall not be overprinted with any advertising matter.

Eventually, all Parts and Manuals will be placed on sale; meanwhile, those not yet on sale (carrying remark, "Order from CAA only") may be obtained without charge from the CAA upon demonstration of valid interest on the applicant's part.

The following tabulation carries in the right-hand column the numbers of all effective amendments to each Part and Manual issued subsequent to its publication. Parts and Manuals obtained from the CAA will include all effective amendments, but amendments for Parts and Manuals purchased from GPO must be requested separately from the CAA. When requesting amendments from the CAA, please be sure to state Part numbers for which they are desired.

ALL AMENDMENTS TO THE REGULATIONS, AND NOTICE OF NEW PARTS AND MANUALS ARE PRINTED IN THE CIVIL AERONAUTICS JOURNAL, AS RELEASED.

Bound volumes of the complete Civil Air Regulations are no longer available. Parts and amendments are punched for filing in standard three-ring binders.

For your guidance we have listed the Parts and Manuals applicable to the various airmen certificates issued.

Pilots:
Parts 01, 20, 60, 501, 503, and Manual 60.
Airline Transport Pilots:
Parts 01, 04, 21, 27, 40, 60, 61, 98, 501, 503, and Manuals 04 and 60.
Lighter-Than-Air Pilots:
Parts 01, 22, 60, 501, 503, and Manual 60.
Aircraft Mechanics:
Parts 01, 04, 15, 18, 24, 501, 503, section 60.32, and Manuals 04, 15, and 18.
Aircraft Engine Mechanics:
Parts 01, 04, 13, 14, 18, 24, 501, 503, and Manuals 04, 14, and 18.
Parachute Technicians:
Parts 15, 25, 54, 60, and Release 144.
Air-Traffic Control-Tower Operators:
Parts 26, 60, and Manual 60.
Aircraft Dispatchers:
Parts 27, 40, 60, 61, and Manual 60.
Ground Instructors (rating in Civil Air Regulations):
Parts 01, 20, 51, 60, 501, 503, and Manual 60.

PARTS CANCELED AND UNASSIGNED

Canceled Parts 00 and 03 now incorporated in Part 501; canceled Part 23 now incorporated in Part 51. Parts 90–96, inclusive, canceled. All other Part numbers not shown are unassigned.

Civil Air Regulations

Aircraft

Part No.	Title	Date	Remarks	Price	Effective Amendments
01	Airworthiness Certificates	10-15-42	On sale at GPO	$0.05	
02	Type and Production Certificates	3-1-41	On sale at GPO	.05	
04	Airplane Airworthiness	8-15-42	On sale at GPO	.15	04-1, Reg. Ser. 228.
13	Aircraft Engine Airworthiness	8-1-41	On sale at GPO	.05	
14	Aircraft Propeller Airworthiness	7-15-42	On sale at GPO	.05	
15	Aircraft Equipment Airworthiness	11-15-40	In stock; order from CAA only		15-1, 15-2, Order 2092.
16	Aircraft Radio Equipment Airworthiness	2-13-41	On sale at GPO	.05	
18	Maintenance, Repair, and Alteration of Certificated Aircraft and of Aircraft Engines, Propellers, and Instruments.	9-1-42	On sale at GPO	.05	

Airmen

20	Pilot Certificates	9-1-42	On sale at GPO	$0.10	20-1, thru 20-5, Reg. Ser. 242, 247.
21	Airline Transport Pilot Rating	10-1-42	On sale at GPO	.05	21-1, 21-2, Reg. Ser. 278.
22	Lighter-Than-Air Pilot Certificates	10-15-42	On sale at GPO	.05	Reg. Ser. 247.
24	Mechanic Certificates	10-1-42	On sale at GPO	.05	24-1, 24-2.
25	Parachute Technician Certificates	1-21-43	In stock; order from CAA only		25-1.
26	Air-Traffic Control-Tower Operator Certificates.	7-1-42	On sale at GPO	.05	26-1, 26-2.
27	Aircraft Dispatcher Certificates	9-1-42	On sale at GPO	.05	27-1.
29	Physical Standards for Airmen	6-1-42	On sale at GPO	.05	

Air Carriers

40	Air Carrier Operating Certification	11-1-42	On sale at GPO	$0.10	40-1, 40-2.

Air Agencies

50	Flying School Rating	11-1-40	On sale at GPO	$0.05	87, 113, 50-3, Reg. No. 216.[1]
51	Ground Instructor Rating	7-1-42	On sale at GPO	.05	
52	Repair Station Rating	10-1-42	On sale at GPO	.05	
53	Mechanic School Rating	8-1-42	On sale at GPO	.05	
54	Parachute Loft Certificates and Ratings	1-21-43	In stock; order from CAA only		

Air Navigation

60	Air-Traffic Rules	7-1-43	On sale at GPO	$0.10	60-1 thru 60-3.
61	Scheduled Air-Carrier Rules	10-15-42	On sale at GPO	.10	61-1 thru 61-11.
66	Foreign Air-Carrier Regulations	1-15-42	On sale at GPO	.05	

Miscellaneous

97	Rules of Practice Governing Suspension and Revocation Proceedings.	10-1-42	In stock; order from CAA only		
98	Definitions	10-15-42	On sale at GPO	$0.05	
99	Mode of Citation of Regulations	11-15-40	In stock; order from CAA only		

[1] No copies available. (Waiver of requirements.) Consult CAA inspector for specific provisions of this amendment.

Regulations of the Administrator

Part No.	Title	Date	Remarks	Price	Effective Amendments
501	Aircraft Registration Certificates	3-31-43	In stock; order from CAA only		
503	Recordation of Aircraft Ownership	3-31-43	In stock; order from CAA only		
510	General Regulations, Washington National Airport.	9-26-41	In stock; order from CAA only		
511	General Aeronautical Rules for the Washington National Airport.	9-26-41	In stock; order from CAA only		
525	Notice of Construction or Alteration of Structures on or Near Civil Airways.	7-23-43	In stock; order from CAA only		
531	Seizure of Aircraft	12-8-41	In stock; order from CAA only		
532	Reproduction and Dissemination of Current Examination Materials.	1-15-43	In stock; order from CAA only		
600	Designation of Civil Airways	3-1-42	Not published [1]		1 through 28.[1]
601	Designation of Airway Traffic Control Areas, etc.	1-15-42	Not published [1]		1 through 42.[1]

Civil Aeronautics Manuals

04	Airplane Airworthiness	2-1-41	On sale at GPO	$0.50	Release 50, 97,[2] 105,[2] 117,[2] 140.[2]
14	Aircraft Propeller Airworthiness	12-1-38	In stock; order from CAA only		
15	Aircraft Equipment Airworthiness	7-1-38	On sale at GPO	.10	
16	Aircraft Radio Equipment Airworthiness	2-13-41	In stock; order from CAA only		Release 62.
18	Maintenance, Repair, and Alteration of Certificated Aircraft and of Aircraft Engines, Propellers, and Instruments.	6-1-41	On sale at GPO	.50	
50	Flying School Rating	12-40	In stock; order from CAA only		Release 77, 111.
52	Repair Station Rating	2-41	In stock; order from CAA only		
53	Mechanic School Rating	5-40	In stock; order from CAA only		
60	Air Traffic Rules	8-1-43	On sale at GPO	.15	

[1] *See Air Navigation Radio Aids.*
[2] *Only pertinent pages furnished.*

Regulations

(*Continued from page 124*)

so limited. In the event that such petition is heard by an examiner, his determination shall be governed by the standards hereinabove set forth, but no decision by an examiner on such petition shall be binding on the Board. Interventions herein provided are for administrative purposes, and no decision to grant leave to intervene shall be deemed to constitute a finding or determination that the intervening party has such a substantial interest in the order that is to be entered in that proceeding as will entitle it to demand court review of such order.

AMENDMENT 21-3 ——— *August 25, 1943*
Effective August 25, 1943:

Effective August 25, 1943, §§ 21.25 and 21.253 of the Civil Air Regulations are revoked.

AMENDMENT 60-2 ——— *July 28, 1943*
Effective July 28, 1943:

Effective July 28, 1943, section 60.39 of the Civil Air Regulations is amended to read as follows:

60.39 *Crossing range approach channel.* Aircraft crossing a range approach channel shall give way to aircraft proceeding along and within the range approach channel, and in addition, aircraft when crossing a range approach channel above 1,500 feet above the ground or water shall do so at a constant altitude and at an angle of not less than 45°.

AMENDMENT 60-3 ——— *August 18, 1943*
Effective August 18, 1943:

Effective August 18, 1943, section 60.3301 of the Civil Air Regulations is amended by striking the following:

"or unless the Board has prescribed, in the interests of safety, a different procedure for the particular airport or landing area."

and inserting in lieu thereof the following:

"or unless the Administrator has prescribed a different procedure for the airport or landing area after finding that such procedure is required in the interest of safety."

Elementary weather for air crew trainees is the subject of the War Department's 23-page Technical Manual 1-231 available for 10 cents a copy from the Superintendent of Documents, Government Printing Office, Washington.

Pilot Error, Company Practice Cited in Report

The fact that the CAA's advice on an operating practice went unheeded was listed among the pertinent findings of the Civil Aeronautics Board in its report on the investigation of Pan American-Grace Airways' fatal accident which occurred high in the Peruvian Andes January 22, 1943.

While the Board named as the probable cause the action of the pilot in continuing the flight on instruments in the overcast, contrary to company flight procedure of which, according to evidence, the pilot was aware, the investigation revealed that company flight procedures over the route had not been put in writing. Findings were that instructions concerning flight procedures were given orally to pilots. The CAA had on at least two occasions, through its regional manager at Fort Worth, Tex., expressed to Panagra the advisability of publishing a flight route manual for the guidance of pilots.

Four crew members and ten passengers were killed, one passenger retaining consciousness and escaping, seriously injured, before the plane, a Douglas DC3A, was consumed by fire. The flight's true course was over relatively low ground but before a 20 mile an hour tail wind which had been blowing across its path the plane drifted off course and crashed at about 13,000 feet.

The annual report of the Civil Aeronautics Administration for 1942 is on sale at the Superintendent of Documents, Government Printing Office, Washington, D. C., at 10 cents a copy.

New Type Approvals

(Approval numbers and dates of assignment in parentheses)

Gliders

University of Denver, EA5, 1 place open land monoplane, Class III (type certificate No. 14, July 29, 1943).

Propellers

G. B. Lewis Company, L44, wood, 72 in. diameter, 44 in. pitch, 75 hp, 2600 rpm (type certificate No. 797, August 18, 1943).

New Models Added to Old Type Approvals

(Approval numbers and dates of approval of new models in parentheses)

Engines

Kinner, R-56; 5 radial air cooled; 160 hp at 1850 rpm at sea level pressure altitude; 362 lbs. (dry) weight; with provision for starter, generator and fuel pump (type certificate No. 153, May 31, 1943).

Propellers

Sensenich, 92H, wood, 92 in. diameter, 74 in. to 70 in. pitch, 160 hp, 1850 rpm (type certificate No. 586, August 3, 1943).

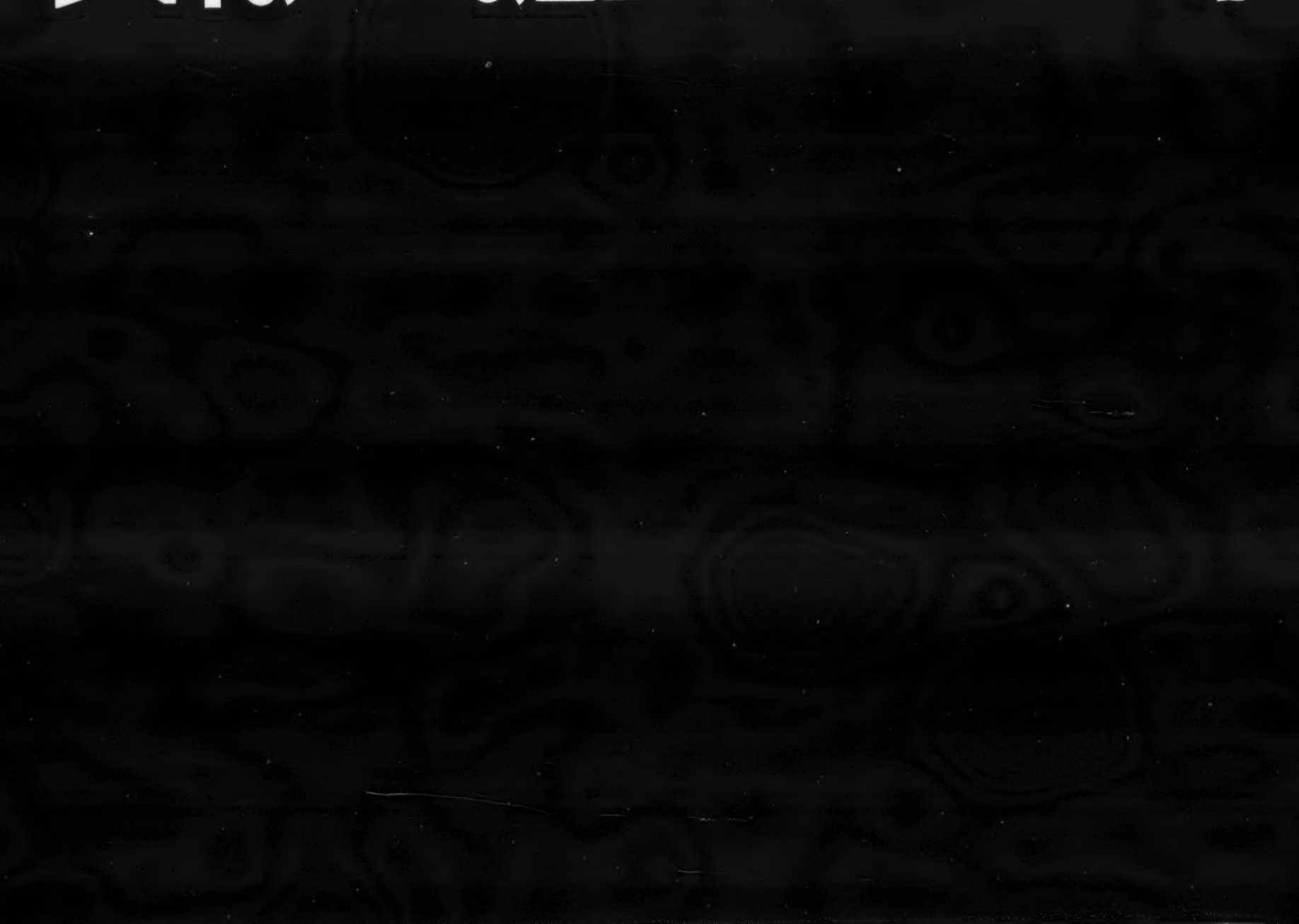
Sensenich, 72HBS, wood, 72 in. diameter, 67 in. to 65 in. pitch, 235 hp, 3000 rpm (type certificate No. 538, August 7, 1943).

Appliances

Hayes, 452A and 452M, low pressure wheels, 5.00-4, Hayes Expander Tube brakes, aluminum and magnesium cast respectively. Approved static load per wheel 1200 lbs. (type certificate No. 10, August 27, 1943).

Hayes, 453A and 453M, low pressure wheels, 5.00—4, no brakes, aluminum and magnesium cast respectively. Approved static load per wheel 1200 lbs. (type certificate No. 10, August 27, 1943).

Strength of Aircraft Elements

ANC-5, handbook on the strength of Aircraft Elements, issued by the Army-Navy-Civil Committee on Aircraft Design Criteria, is on sale at the Government Printing Office, Superintendent of Documents, Washington, D. C., for 35 cents a copy.

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